

What Is Claimed Is:

- 1        1. A filtering induction device, comprising:
  - 2            a first flat coil formed by winding a first conductive strip
  - 3            to form a spiral having a plurality of circles, wherein the
  - 4            circles each have a first radius and are arranged layer by layer,
  - 5            wherein the first conductive strip has a first upper surface
  - 6            and a first lower surface, wherein the first conductive strip
  - 7            is covered with an isolation material and the first flat coil
  - 8            is used as an inductor;
  - 9            a second flat coil formed by winding a second conductive
  - 10          strip to form a spiral having a plurality of circles, wherein
  - 11          the circles each have a second radius and are arranged layer
  - 12          by layer, wherein each of the circles of the second conductive
  - 13          strip is wound between the first upper surface and the first
  - 14          lower surface, to serve as a capacitor; and
  - 15          a core structure coupled to the first flat coil and the second
  - 16          flat coil.
- 1        2. The filtering induction device of claim 1, wherein the
- 2          core structure is further comprised of:
  - 3            a core base adapted to contain the first and second flat
  - 4            coils; and
  - 5            a core cover disposed on the core base.
- 1        3. The filtering induction device of claim 2, wherein a
- 2          sidewall of the core base is provided with at least one opening,
- 3          via which the first and second flat coils extending out from
- 4          the core base.

1       4. The filtering induction device of claim 1, wherein a  
2 terminal of the second flat coil is grounded.

1       5. The filtering induction device of claim 1, wherein the  
2 thickness of the first flat coil is substantially equal to the  
3 product of the thickness of the first conductive strip times  
4 the number of the circles that the first conductive strip is  
5 wound:

1       6. The filtering induction device of claim 1, wherein the  
2 thickness of the second flat coil is substantially equal to the  
3 product of the thickness of the second conductive strip times  
4 the number of the circles that the second conductive strip is  
5 wounded.

1       7. The filtering induction device of claim 1, wherein the  
2 first conductive strip is wound such that the first upper  
3 surface substantially faces the first lower surface parellelly.

1       8. The filtering induction device of claim 1, wherein the  
2 second conductive strip is wound such that the second upper  
3 surface substantially faces the second lower surface  
4 parellelly.

1       9. A filtering induction device, comprising:  
2            a first coil having a plurality of circles, wherein the first  
3          coil is used as an inductor and is covered with an isolation  
4          material;  
5            a second coil having a plurality of circles interlacing with  
6          the plurality of circles of the first coil; and

7 a core structure coupled to the first and second coils.

1 10. The filtering induction device of claim 9, wherein the  
2 first coil is a flat coil.

1 11. The filtering induction device of claim 9, wherein the  
2 second coil is a flat coil.

1 12. The filtering induction device of claim 9, wherein the  
2 core structure is further comprised of:

3 a core base adapted to contain the first and second coils;  
4 and  
5 a core cover disposed on the core base.

1 13. The filtering induction device of claim 12, wherein the  
2 core base is provided with at least one opening on a sidewall  
3 thereof, via which the first and second coils extend out from  
4 the core base.

1 14. The filtering induction device of claim 9, wherein a  
2 terminal of the second coil is grounded.